

REMARKS

The present amendment is submitted in response to the Final Office Action dated November 29, 2001, which set a three-month period for response, making this amendment due by February 28, 2002.

Claims 16 through 31 are pending in this application.

In the Office Action, the newly submitted drawings directed to the plate-shaped support were objected to as not providing adequate drawing views to represent the support as claimed. Claims 16-31 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 16-18, 20, 22-27, and 29-31 stand finally rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 5,882,786 to Nassau in view of U.S. Patent No. 2,521,846 to Gregory. Claims 19, 21, and 28 stand finally rejected over Nassau in view of Gregory and in further view of U.S. Patent No. 5,431,028 to Lampert.

Turning first to the rejection of the claims as indefinite, the Applicants have amended claim 16, in line 3, to change "said pyramid-shaped depression" to "said pyramid-shaped depressions".

Regarding the objection to the newly submitted drawings, the Applicants will file additional views illustrating the plate-shaped support, as the Examiner requested, via Supplemental Amendment within 30 days of this response.

Looking now at the substantive rejection of the claims, the Applicants must again respectfully disagree with the continued rejection of the claims as obvious over the cited combinations of the Nassau, Gregory and Lampert references. In light of

the continued and final rejection of the claims over the Nassau, Gregory, and Lampert references, the Applicants believe a reiteration of the marked – and patentable – differences between the present invention and the cited references is appropriate.

With the present invention, synthetic gemstones are produced from precious stone layers by vapor phase deposition on large surface areas. Unlike state of the art or prior art synthetic gemstones, the gemstones of the present invention have an unusually thin layer, which, despite “unfavorable” dimensions compared to known gemstones, provide an attractive and decorative appearance.

The thrust of the present invention is that an attractive gemstone can be produced by vapor phase deposition of a very thin layer of a precious stone over a large surface area, specifically, a support. However, due to the thinness of the layers, the layers are not suited for further machining (i.e., polishing and grinding) as a jewelry stone once deposited.

Rather, the present invention provides that during the formation of the gemstone, a product is produced that is already suited for use as a jewelry stone. This goal is accomplished by providing a support, onto which the gemstone layer is deposited, which has a plurality of pyramid-shaped depressions.

This support surface with the pyramid-shaped depressions need not be dimensioned as a jewelry stone. From a support surface having a large surface area and deposited with the thin vapor deposition layer, many sections can be separated off and shaped to fit a piece of jewelry, such as a ring. Thus, the vapor deposition

layer is so firmly bonded to the support that it cannot be dislodged or displaced when the support is divided for creating individual pieces for jewelry.

None of the cited references even remotely suggests the use of a support having a large surface area with pyramid-shaped depressions onto which the precious stone layer is applied via vapor phase deposition, as defined in claim 16.

Nassau et al specifically discloses a gemstone made from silicon carbide of 0.25 to 5 carats (the size and weight of a natural diamond), which are cut out of a synthetic silicon carbide crystal and subsequently polished like a gemstone (Nassau et al, column 3, lines 8-30). Then, in the traditional manner, the gemstone is placed on a piece of jewelry, for example in a setting of a ring. Since the upper or face surfaces of these gemstones can be damaged during retention in a piece of jewelry, a synthetic diamond layer is added as a protective layer (Nassau et al, column 3, lines 59-67). This diamond layer, however, imparts no decorative characteristics to the silicon carbide gemstone, nor is any intention of imparting decorative features to the gemstone disclosed or implied in Nassau. Any light reflecting or decorative characteristics of the Nassau gemstone are the result of grinding or polishing the silicon carbide stone.

The Gregory patent discloses decorative articles made of glass. These articles are produced by smelting glass in a mold or shape and then cooling the molds to achieve a determined configuration (Gregory, column 4, lines 38-72). Again, smelting and molding glass is not related to the present invention. Further, Gregory neither discloses nor suggests the use of a vapor phase deposition in an

extremely thin layer onto a large-surface area support with pyramid-shaped depressions to impart decorative, light reflecting qualities.

The patent to Lampert et al relates to a jewelry stone with synthetic diamond "baguettes". These "baguettes", however, are not precious stones; rather, the stone includes a reflective metal surface with one or more concave indentations formed therein. The indentations have a plurality of faceted reflective surfaces or corrugations, which are intended to reflect light like a natural diamond (Lampert et al, column 1, lines 45-55). Lampert fails to provide or even suggest the plurality of pyramid shaped depressions on a large-surface area support and the application of a precious stone layer onto this support by vapor phase deposition.

Since none of these cited references discloses or even suggests the features of the present invention, as defined in claim 16, the practitioner skilled in the art simply could not be led to the present invention by combining these references.

Moreover, the present invention provides a drastic improvement over the stones disclosed in the cited references by providing unexpected and surprising results: with a thin surface-shaped synthetic gemstone layer, superior light-reflecting qualities are obtained, especially since the pyramid-shaped depressions are disposed beneath the stone when it is placed on the support.

The Applicants therefore respectfully request withdrawal of the final rejection of claims 16-31 and allowance of this application.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss

appropriate claim language that will place the application into condition for allowance.

Respectfully Submitted,



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Version with Markings to Show Changes Made:**16. Gemstone comprising:**

a plate-shaped support having a surface with a plurality of pyramid-shaped depressions, each of said pyramid-shaped depressions having a pyramid angle formed between adjoining faces of said at least one pyramid-shaped depression; and

a vapor phase deposit layer comprising a precious stone layer applied on said plate-shaped support in a selected orientation, said precious gemstone layer having an upper surface facing away from said plate-shaped support and an underside, said underside having a plurality of pyramid-shaped projections arranged to correspondingly fit a respective one of said pyramid-shaped depressions, whereby said orientation of said vapor phase deposit layer upon said plate-shaped support imparts decorative, light-reflective qualities to said gemstone.